

Bituminous Concrete Quality Control Plan Outline

This Quality Control Plan (QCP) outline, Project Summary Sheet outline and Extended Season Paving outline are for the bituminous concrete placement section of the QCP that is required by the specifications to be submitted by the Prime Contractor. The Quality Control Plan is required to be submitted once each calendar year. All of the outlines formats are required and shall assist the Prime Contractor in providing the specific information required by the general description found in the specifications to assess the process and organization of performing the bituminous concrete paving and compaction.

The **QCP** shall be valid for a single calendar year and shall expire at the end of the calendar year in which it was submitted. It shall be submitted at the pre-construction meeting or a minimum of 30 days prior to any paving.

The **Project Summary Sheet** will be required for each specific project, containing project specific information. It shall be submitted at or prior to the pre-paving meeting.

The **Extended Season Paving Plan** will be required for projects that will pave during the specification defined Extended Season. The separate outline requirements are described below.

QCP requirements:

1. Title Page

- Contractor's name
- Plan description
- Submittal date (updated if revised)

2. Table of Contents

- Sections and corresponding page numbers

3. Paving and QC Personnel

- Plan Manager (Prime Contractor)
 - Qualifications, authority and responsibilities
 - Contact information
- Process Control Technician(s) (placement procedures)
 - Qualifications, authority and responsibilities
 - Contact information
- Quality Control Technician(s) (density testing)
 - Qualifications, authority and responsibilities
 - Contact information
 - Name and contact information of Radiation Safety Officer (RSO) if using a nuclear density gauge

4. Best Paving Practices and Paving Equipment

- List of equipment including pavers, rollers, material transfer vehicle (MTV) including axle load information, type of automatic grade control and lighting for night work, secondary joint compaction device
- Maximum paver speed
- Equipment break down (procedures or actions to be taken)
- Longitudinal joint (notched wedge joint application) construction device and compaction method, monitoring for compliance, additional warning signs.
- Procedure for generating a Compaction Curve for establishing a rolling pattern (thin lifts, ultra-thin, special mixes, etc.)

- Inclement weather procedures (Specify personnel responsible, address procedures for prior to startup or ending operations early)
- Extended Season paving operations (Procedures, actions, coordination, scheduling, etc.) Detailed project specific information may be submitted as a supplement to the QC Plan for approval prior to Extended Season paving operations.

5. QC Process Control and Testing Equipment

- Process for balancing operation, tack coat application visual inspection, monitoring for segregation, haul units, etc.
- Mix delivery temperature range, minimum placement ambient/surface temperatures
- Process for establishing and modifying rolling pattern
- Type of testing devices for density and temperature
- Procedure for process control cores (including cores to be used for the density gauge correlation process)
- Minimum density testing frequency at time of placement
- Test result procedure (documentation and timeline for submittal)

6. Troubleshooting

- Procedures for corrective action of non-conforming materials or workmanship (i.e. equipment problems, density, mat or joint issues.
- Documentation of actions taken

7. Core Sampling for bituminous concrete Acceptance

- Procedure, equipment and schedule
- Personnel information

8. Dispute Resolution

- Procedure, equipment and schedule
- Personnel information

QCP Project Summary Sheet requirements:

2. Title Page

- Contractor's name
- Project number and description
- Submittal date (updated if revised)

3. Personnel

- Plan Manager
- Process and QC technicians
 - Qualifications
 - Authority and responsibilities
 - Contact phone numbers
 - Name and contact information of Radiation Safety Officer (RSO) if using a nuclear density gauge

4. Material

- Producer (bituminous concrete source of supply)
- Polymer Modified Asphalt (PMA), Warm Mix Asphalt technology (if applicable)
- Tack coat source of supply
- Temperature range for mixes not noted in the general QC plan

5. Paving Equipment

- Paver, attachments (automatic grade control, longitudinal joint devices and other attachments specific to the project)
- Roller(s)
- Material transfer vehicle (MTV)

6. Paving Sub-Contractors (If applicable)

- Sub-contractor's name
- Personnel
 - Authority and responsibilities if performing QC duties
- List of equipment (see Item #4 above)

Extended Season Paving Plan requirements:

The Extended Season Paving Plan is submitted for paving that will take place during the Extended Season (October 15th – April 30th). The Extended Season Paving Plan shall be submitted per project per calendar year when paving is scheduled during the extended season. The plan shall be submitted and approved by the Engineer prior to any pavement being placed during the extended season.

Extended Season Paving Plan for Project XXXX-XXXX (Project Description)

- General Contractor-_____
- Paving Sub-Contractor-_____
- Anticipated Paving Dates-_____
- HMA Plant-_____
- Minimum Mix Delivery Temperature-_____
- Average Haul Distance-_____
- Average Haul Time-_____
- Number of Trucks-_____
- Heated/Insulated Body Trucks (Y/N)-_____
- Tons to be placed per day/night:_____
- Maximum Paver Speed (ft/min)-_____
- Number of Paver Passes-_____
- Average Maximum Paving Length-_____
- Average Compacted Lift Thickness-_____
- Number of Rollers Assigned-_____
- Additional Comments-_____